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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/685,954

10/15/2003

Todd M. Wenger

H1799-00180

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08/14/2006

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EXAMINER

FORD, JOHN K

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/685,954	<b>Applicant(s)</b> WENGER, TODD M.	
	<b>Examiner</b> John K. Ford	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 6/12/06
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 14-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 14-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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Applicant's response of June 12, 2006 has been studied carefully.

Applicant's election of the first species of Figure 1-6a, without traverse, is acknowledged. Claims 1-5 and 14-16 have been identified as readable on the elected species. Claims 6-13 have been cancelled. In view of the newly added limitations to the "vapor line" and "liquid return line", not previously claimed, further discussion of the previously applied references is unnecessary. New rejections based on a new search for this newly claimed subject matter follow.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 3, 5, 14, 15 and 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hisano et al. (USP 5,198,889).

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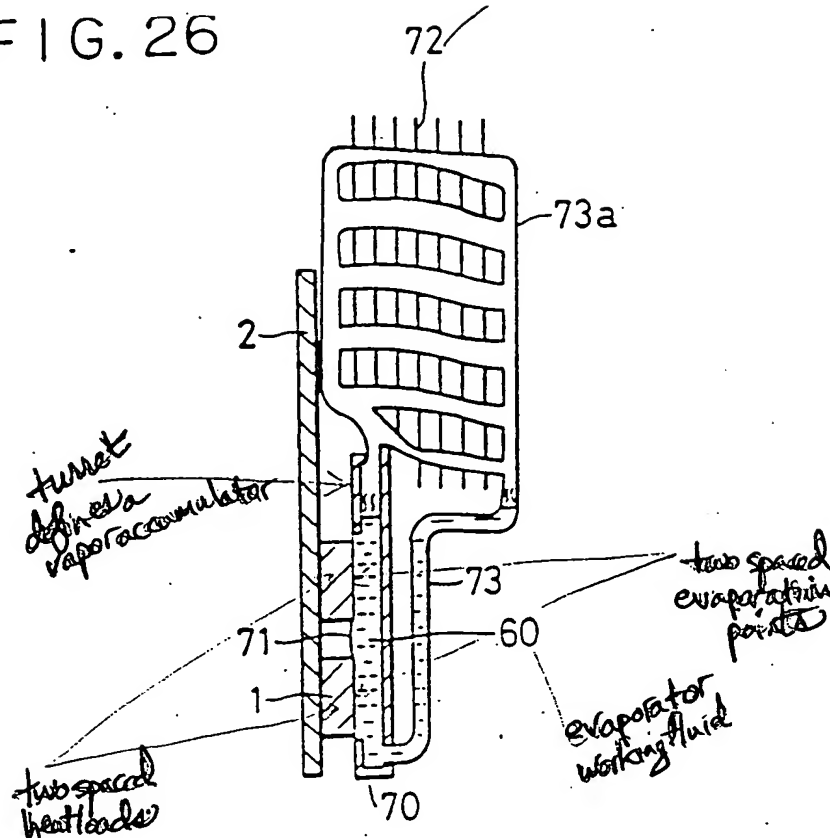
See Figures 25 and 26, in particular. In both figures, a plurality of loads 1 is shown. The evaporator working fluid 60 is located adjacent to the plurality of loads 1, inside of a closed envelope. In both figures, a finned condenser is shown above the evaporator. A vapor line and a separate liquid return line are shown in both figures. The "at least two spaced evaporation points" are shown adjacent to a respective one of the plurality of loads 1. Liquid phase is commonly supplied to these "at least two spaced evaporation points."

Regarding claims 2 and 3, the reservoir is shown at reference numeral 71 in Figure 26 and at a corresponding location (having no numeral) in Figure 25.

Regarding claims 5 and 14, reference numeral 71 in Figure 26 is a recessed well that satisfies all of the limitations claimed including the "stepped edges" (adjacent to the two heat loads 1).

Regarding claims 15 and 16, see the diagram below, where the examiner has annotated Figure 26 of Hisano et al to show the claimed parts.

FIG. 26



Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art to Hisano et al. (USP 5,198,889) as applied to claim 1 above, and further in view of any one of Chesser (USP 6,981,543) or Garner (USP 6,615,912) or Meijer (USP 4,785,875).

To have added a wicking material to the surface of the evaporator nearest the heat loads 1 in Figure 25 or 26 of Hisano to advantageously help distribute the liquid over the entire surface exposed to the heat loads and prevent "dry-out" and advantageously provide a liquid storage function would have been obvious to one of ordinary skill in the art. Such a wicking material is shown at 52 and 66

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in Chesser and is described in column 3, lines 35-65 of Garner, the latter description incorporated here by reference. The advantages of evaporators with wicks are also discussed in Meijer, e.g. to prevent "dry-out" (see col. 3, lines 21-31) and advantageously provide a liquid storage function (see column 3, lines 43-46).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to John K. Ford at telephone number 571-272-4911.



**John K. Ford**  
**Primary Examiner**